

Great Lakes Piping Plovers

What is a Piping Plover?

The Piping Plover (*Charadrius melodus*) is a relative of the Killdeer. Most people have seen Killdeer at parks, playgrounds, and golf courses. Piping Plovers are smaller, and lighter colored. Breeding adults have a single black band around the neck, while the Killdeer has two. The Great Lakes population of Piping Plovers is endangered — they are in danger of extinction. The “piping” part of the name is a description of its call, a sweet, soft whistle. Plovers are a group of shorebirds that feed with run-stop-peck movements, somewhat like the way an American Robin feeds.

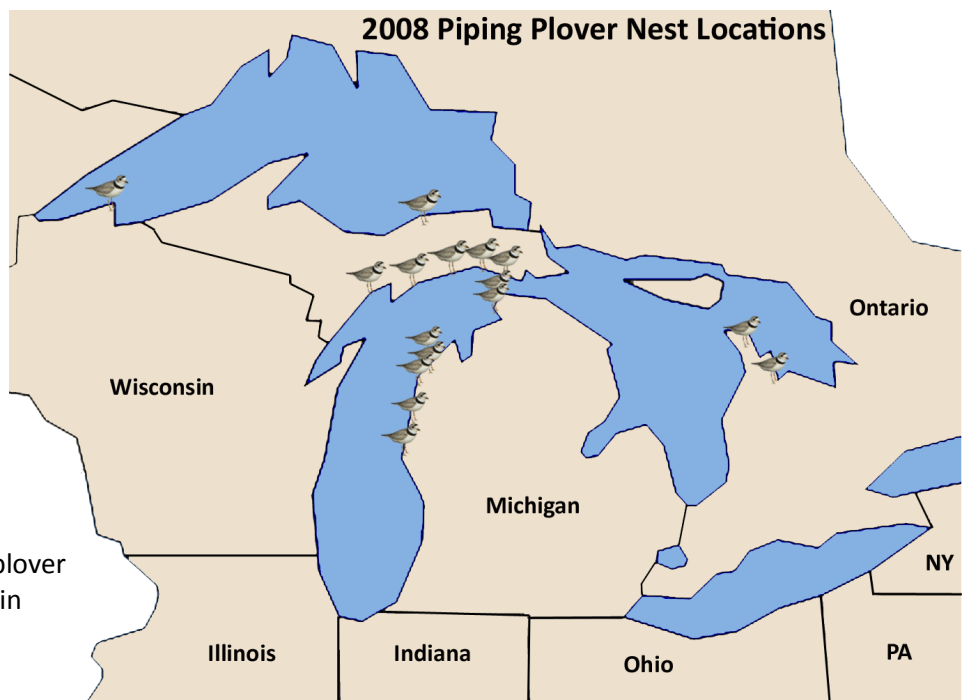
There are three small populations of Piping Plovers: one in the northern Great Plains, one on the Atlantic Coast, and one on the Great Lakes. Individuals from different populations spend the winter together, but return to nest in the region where they hatched, so there is no interbreeding between the populations.

When to Look for Piping Plovers

Piping Plovers can be found in the Great Lakes area from mid-April through August. They return in April or early May after spending the fall and winter months on the southern Atlantic Coast and on the Gulf Coast from Florida to Texas. Piping Plovers remain here through the summer to nest and raise their young. In mid-July the females begin forming flocks and migrating south, leaving their mates to watch over the chicks until they learn to fly. Once the chicks are independent in late July, the males and chicks also begin to leave their summer territories. By late August they all have headed south to their winter homes.

Where to look for Piping Plovers.

In the Great Lakes, Piping Plovers are almost always found on beaches with cobble. (small stones) The greatest concentration of Piping Plovers in the Great Lakes occurs at Sleeping Bear Dunes National Lakeshore. Smaller populations are found in many locations along the shorelines. (see map) Recently there have been increasing numbers of plover pairs every summer, so nests are found in additional areas each year.



Piping Plover behaviors one can observe



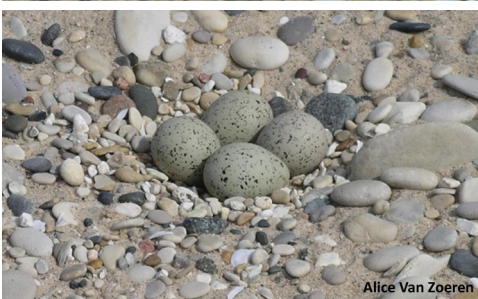
► **Feeding** – Plovers spend much of their day eating insects, spiders, and other small invertebrates.

◄ **Flight displays** – When they first return, males fly back and forth over their chosen nesting area, peeping constantly. This is one way they establish their territories and attract females to join them.



► **Territory defense** – Both males and females engage in territory defense. They walk shoulder to shoulder along the boundary with the birds from the adjacent territory. ◄ Sometimes they lower their heads, puff up their back feathers, and charge at a trespassing bird.

► **Scraping** – Nest-building is a simple affair of scraping out a small hollow in the sand and lining it with bits of rock and shell. Males make nests by laying on their chests and kicking backwards with their feet.



◄ **Incubation and trading incubation duties** – Piping Plovers usually lay four eggs. Both parents take equal turns in incubating (sitting on the eggs). When it is time to trade duties one bird runs quickly to the nest and the other then runs away to feed.

► **Chicks** – Most chicks hatch in June. They are precocial – this means that they can run around and feed themselves within hours of hatching. It takes them three to four weeks to grow enough to be able to fly.



◄ **Brooding** – During the first week after hatching, chicks are unable to maintain their own body temperature. They spend much time snuggled in under their parents' wings staying warm. You might see a plump-looking adult bird that appears to have up to 10 legs!

► **Chick Defense** – The adults take turns watching over their chicks and defending them from predators. They give a call that warns the chicks to hide if danger threatens. Can you find the two Piping Plover chicks that were startled by a different kind of shorebird flying by? ◄ They also sometimes act like they are injured and would be easy to catch, in order to lead predators away. Once they lure the predator far enough from their nest or chicks, they fly to safety.



How People are helping Piping Plovers

Piping Plovers became a protected species under the Endangered Species Act in 1986. This gives managers some tools to help protect the birds and their habitat. Many agencies, organizations and individuals work to protect this small bird. The US Fish and Wildlife Service, National Park Service, Michigan DNR, the University of Minnesota and the University of Michigan Biological Station, are a few of the many groups involved in the effort. There are also many individuals who volunteer their time to help.

When the Piping Plovers return in spring, plover monitors —people who take care of and study plovers — begin watching their activities. Once the plovers begin to establish territories, staff and volunteers close the nesting areas to people by putting up rope fencing. This prevents disturbance which might cause the birds to abandon their nests, as well as protecting eggs from accidentally being stepped on .

Once all four eggs are laid, a trained crew builds an exclosure — a wire fence with a mesh top — around the nest. This prevents predators such as dogs, gulls, crows, and raccoons from taking the eggs. The holes in the fencing are large enough to allow the adult plovers to go in and out.

During incubation, plover monitors check each pair of Piping Plovers daily to make sure that both are present and taking care of their eggs. Once the chicks hatch they are checked and counted daily until they can fly.



Since the parent plovers share incubation duties, it takes both of them to nest successfully. If something happens to one of the pair before their eggs hatch, the other is likely to abandon the nest. In that case the eggs will be taken to a captive-rearing facility at the University of Michigan Biological Station to be incubated, hatched and raised, then released near other young plovers when they are independent.

With this intensive protection program the number of nesting Great Lakes plovers has risen from 16 pairs in 1986 to 63 pairs in 2008.

Research about Piping Plovers

As part of the Piping Plover recovery effort each bird is banded with colored-plastic bands that identify it. By studying color bands, researchers have learned important facts about piping plovers: they live an average of five years; they spend their winters along the Atlantic and Gulf Coasts; they don't always return to nest where they were hatched; once they successfully raise chicks they usually return to the same nesting territory and often meet the same mate there. The information learned through banding helps wildlife biologists make good decisions to help protect Piping Plovers. There is much to discover.

One of the longest-surviving plovers was called BO:RX— for his Dark **B**lue, **O**range, **R**ed and metal "**X**" bands. He hatched in 1994 on North Manitou Island, and nested at Platte Point from 1996 to 2006. He had the same territory each year and the same mate all but three of those years. Each year from 1996 through 2000 three of his chicks survived long enough to learn to fly; from 2001 through 2005 he successfully raised all four chicks each year. In 2006 his mate disappeared while they had eggs to incubate, probably the victim of a predator, and his chicks had to be captive-reared. He never returned in 2007, but one of his sons has been nesting nearby since 2004, another nested in 2007 in his father's old territory and a daughter has been raising chicks on North Manitou Island. His good genetics are very well represented in the Great Lakes population. We also know that he spent winters on the Gulf Coast in Texas.



Another interesting story belongs to a female who nested at Sleeping Bear Dunes National Lakeshore for four years. She was from a nest north of Petoskey. One night just before the eggs were due to hatch a Great Horned Owl tried to attack the incubating parent and got caught in the mesh protecting the nest. In its struggles to get free it broke all four eggs. Two were beyond repair, but two were barely cracked. They were transported to the captive-rearing facility and successfully raised and released. Both siblings returned to Sleeping Bear the next summer and “YOYO” — for her Yellow, Orange, Yellow and Orange bands— met BO:RX’s son and nested successfully, twice on the mainland, then moved to North Manitou island and nested twice there with a different mate. The last we heard about her she was seen and photographed at the end of the 2007 breeding season on along the east shore of Lake Huron. She didn’t return in 2008.



How you can help protect Piping Plovers

The Great Lakes population of Piping Plovers is endangered for two main reasons: habitat loss and predation. The beaches they require for nesting habitat are also very desirable to humans for development and recreational use. Dogs and cats as well as wild predators such as gulls, crows, raccoons, foxes, and Merlins (a small falcon) often harass and kill Plover adults and chicks and also eat their eggs.

Here’s what you can do-

Observe and obey the closed area fences. Watch and enjoy Plovers from a distance.

Always keep dogs and other pets on leashes and out of areas of the beach closed to pets.

Don’t feed wildlife or leave food on the beach. This increases the population of predators and attracts them to the area. While they’re there they may also prey on Piping Plover eggs, chicks or adults.

If you find a Plover family outside of the fencing give them some space. The small chicks can disappear quickly in sand or cobble and are easily stepped on.

Watch for and report sightings of Piping Plovers nesting in new areas. (plover@umn.edu or 612-624-1202)

If you see anyone harassing Piping Plovers please report it to local law enforcement officials.

Observe and enjoy this endangered and endearing shorebird.

More information about Piping Plovers

Piping Plover Summer by Janet Riegle (2008 Raven Publications, Inc. Ely, MN) — Picture book with accurate information about Piping Plover behavior, biology and protection.

www.fws.gov/endangered/i/B69.html — US Fish and Wildlife Service website about Great Lakes Piping Plovers.

www.waterbirds.umn.edu/Piping_Plovers/piping1.htm — University of Minnesota website about Great Lakes Piping Plovers.

www.nps.gov/slbe/naturescience/pipingplover.htm — Sleeping Bear Dunes National Lakeshore Piping Plover information.

www.ecos.fws.gov/docs/recovery_plan/030916a.pdf — US Fish and Wildlife Service document. Great Lakes Piping Plover Endangered Species recovery plan.

<http://www.birds.cornell.edu/> — A great deal of general bird information and many citizen science projects. Also a sound and video library. Cornell’s information about Piping Plovers — http://www.birds.cornell.edu/AllAboutBirds/BirdGuide/Piping_Plover.html

Piping Plover Information Sheet Review Questions

Name _____

1. Describe the physical characteristics of a Piping Plover?
2. How are they different from Killdeer?
3. Why are they endangered?
4. Tell three things people are doing to help Piping Plovers?
5. What is their nesting habitat?
6. How many eggs do they lay?
7. During what months might one find Piping Plovers in the Great Lakes area?
8. How do the parents cooperate in incubating eggs and raising chicks?
9. What do they eat?
10. How do the parents protect their chicks?
11. What do the chicks do to protect themselves?
12. What are some things you can do to help protect Piping Plovers?
13. BONUS QUESTION — How old was BO:RX?

Vocabulary:

Fledge—Learn to fly.

Exclosure—A fence placed around nests to keep predators from eating the eggs. The wire mesh is large enough that adult Piping Plovers can easily run in and out but larger birds and mammals can't get in. There is a mesh top to keep gulls and crows from getting inside.

Endangered species— A species that is in danger of becoming extinct.

Captive-rearing — Raising in captivity.

Plover monitor — A person who protects and studies Piping Plovers.

Longevity—How long an animal (or other living thing) lives.